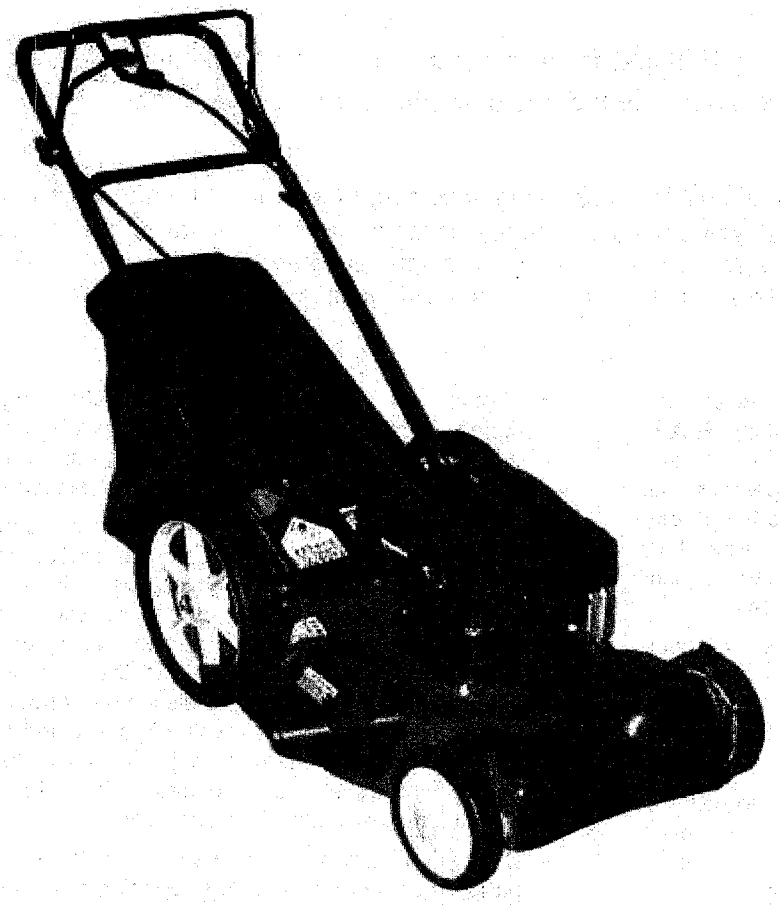
OPERATOR'S MANUAL



MODEL SERIES 560

IMPORTANT: READ SAFETY RULES AND INSTRUCTIONS CAREFULLY

Warning: This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer or contact the service department, P.O. Box 368022 Cleveland, Ohio 44136-9722.

MTD PRODUCTS INC. P.O. BOX 368022 CLEVELAND, OHIO 44136-9722

PRINTED IN U.S.A.

FORM NO. 770-1051A
11/97

SECTION 1: IMPORTANT SAFE OPERATION PRACTICES

WARNING: THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH, IF NOT FOLLOWED, COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE YOUR LAWN MOWER. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY. WHEN YOU SEE THIS SYMBOL, HEED ITS WARNING.

WARNING: The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

DANGER: Your lawn mower was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This lawn mower is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

1. GENERAL OPERATION

- Read this operator's manual carefully in its entirety before attempting to assemble this machine. Read, understand, and follow all instructions on the machine and in the manual(s) before operation. Be completely familiar with the controls and the proper use of this machine before operating it. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
- Your rotary mower is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times. Your unit has been designed to perform one job: to mow grass. Do not use it for any other purpose.
- Never allow children under 14 years old to operate a power mower. Children 14 years old and over should only operate mower under close parental supervision. Only responsible individuals who are familiar with these rules of safe operation should be allowed to use your mower.
- Keep the area of operation clear of all persons, particularly small children and pets. Stop engine when they are in the vicinity of your mower to help prevent blade contact or thrown object injury. Although the area of operation should be completely cleared of foreign objects, an object may have been overlooked and could be accidentally thrown by the mower in any direction and cause serious personal injury to the operator or any others allowed in the area.
- Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts. Shirts and pants that cover the arms and legs and steel-toed shoes are recommended. Do not wear loose fitting clothes or jewelry. They can be caught in moving parts. Never operate a unit in bare feet, sandals, slippery or light weight (e.g. canvas) shoes.
- Always wear safety glasses or safety goggles during operation or while performing an adjustment or repair, to protect eyes from foreign objects that may be thrown from the machine in any direction.
- Thoroughly inspect the area where the equipment is to be used. Remove all stones, sticks, wire, bones, toys and other foreign objects which could be picked up and thrown by the mower in any direction and cause serious personal injury to the operator or any others allowed in the area. Plan your mowing pattern to avoid discharge of material toward roads, sidewalks, bystanders and the like. To help avoid a thrown objects injury, keep children, bystanders and helpers at least 75 feet from the mower while it is in operation.
- Do not put hands or feet near or under rotating parts. Keep clear of discharge opening at all times as the rotating blade can cause injury.
- Many injuries occur as a result of the mower being pulled over the foot during a fall. Do not hang on to the mower if you are falling; release the handle immediately.
- Never pull the mower toward you while you are walking. If you must back the mower away from a wall or obstruction first look down and behind, and then follow these steps:
  - Step back from the mower to fully extend your arms.
  - Be sure you are well balanced with sure footing.
  - Pull the mower back slowly, no more than half way toward you.
  - Repeat these steps as needed.
- Do not operate the mower while under the influence of alcohol or drugs.

- Do not engage the self-propelled mechanism on units so equipped while starting engine.
- The blade control handle is a safety device. Never attempt to bypass its operation. Doing so makes the safety device inoperative and may result in personal injury through contact with the rotating blade. The blade control handle must operate easily in both directions and automatically return to the disengaged position when released.
- Never operate the mower in wet grass. Always be sure of your footing. A slip and fall can cause serious personal injury. Keep a firm hold on the handle and walk, never run. If you feel you are losing your footing, RELEASE THE BLADE CONTROL HANDLE IMMEDIATELY and the blade will stop rotating within three seconds.
- Mow only in daylight or good artificial light.
- Stop the blade when crossing gravel drives, walks or roads.
- If the equipment should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
- Shut the engine off and wait until the blade comes to a complete stop before removing the grass catcher or unclogging the chute. The cutting blade continues to rotate for a few seconds after the engine is shut off. Never place any part of the body in the blade area until you are sure the blade has stopped rotating.
- Never operate mower without proper guards, grass catcher, plates or other safety protective devices in place.
- Muffler and engine become hot and can cause a burn. Do not touch.
- Only use accessories approved for this machine by the manufacturer. Read, understand, and follow all instructions provided with the approved accessory.
- If situations occur which are not covered in this manual, use care and good judgment. Contact your dealer for assistance. Telephone 1-800-800-7310 for the name of your nearest dealer.

2. SLOPE OPERATION

For your safety, use the slope gauge included as part of this manual to measure slopes before operating this unit on a sloped or hilly area. If the slope is greater than 15 degrees as shown on the slope gauge, do not operate this unit on that area or serious injury could result.

DO:

- Mow across the face of slopes; never up and down. Exercise extreme caution when changing direction on slopes.
- Watch for holes, ruts, hidden objects, or bumps. Tall grass can hide obstacles.
- Always be sure of your footing. A slip and fall can cause serious personal injury. If you feel you are losing your balance release the blade control handle immediately and the blade will stop in less than 3 seconds.

DO NOT:

- Do not mow near drop-offs, ditches or embankments. The operator could lose footing or balance.
- Do not mow slopes greater than 15 degrees as shown on the slope gauge.
- Do not mow on wet grass. Reduced footing could cause slipping.

3. CHILDREN

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the mower and the mowing activity. Never assume that children will remain where you last saw them.

- Keep children out of the mowing area and under the watchful care of a responsible adult other than the operator.
- Be alert and turn mower off if a child enters the area.
- Before and while moving backwards, look behind and down for small children or other objects.
- Never allow children under age 14 to operate the mower. Children 14 years of age and above should read and understand the operation instructions and safety rules in this manual.
- Use extreme care when approaching blind corners, shrubs, trees, or other objects that may obscure your vision of a child or hazard.

4. SERVICE

- Use extreme care in handling gasoline and other fuels. They are extremely flammable and the vapors are explosive.
- Use only an approved gasoline container.
- Never remove gas cap or add fuel while the engine is running. Allow engine to cool at least two minutes before refueling.
- Replace gasoline cap securely and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.
- Extinguish all cigarettes, cigars, pipes and other sources of ignition.
- Never refuel machine indoors because flammable vapors will accumulate in the area.
- Never store the machine or fuel container inside where there is an open flame or spark such as a gas water heater, space heater, or furnace.
- Never run an engine inside a closed area.

- To reduce fire hazard, keep mower free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage. Allow mower to cool at least 5 minutes before storing.
- Before cleaning, repairing, or inspecting, make certain the blade and all moving parts have stopped. Disconnect the spark plug wire, and keep the wire away from the spark plug to prevent accidental starting.
- Check the blade and engine mounting bolts at frequent intervals for proper tightness. Also, visually inspect blade for damage (e.g., bent, cracked or worn). Replace with blade which meets original equipment specifications listed in this manual.
- Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
- Never tamper with safety devices. Check their proper operation regularly.
- After striking a foreign object, stop the engine, remove the wire from the spark plug, and thoroughly inspect the mower for any damage. Repair the damage before starting and operating the mower.
- Never attempt to make a wheel or cutting height adjustment while the engine is running.
- Grass catcher components are subject to wear, damage and deterioration, which could expose moving parts or allow objects to be thrown. For safety protection, frequently check components and replace with manufacturer's recommended parts, when necessary.
- Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves, and use extra caution when servicing them.
- Do not change the engine governor setting or overspeed the engine. Excessive engine speeds are dangerous.

WARNING - YOUR RESPONSIBILITY: Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.

TO REDUCE THE RISK OF INJURY, DO NOT OPERATE MOWER UNLESS REAR TRAILING SHIELD AND THIS GUARD OR ENTIRE GRASS CATCHER IS IN ITS PROPER PLACE.
DANGER
KEEP HANDS and FEET AWAY
DANGER
AVOID SERIOUS INJURY OR DEATH
▪ KEEP HANDS AND FEET AWAY FROM ROTATING PARTS.
▪ REMOVE OBJECTS THAT CAN BE THROWN BY THE BLADE IN ANY DIRECTION. WEAR SAFETY GLASSES.
▪ DO NOT MOW WHEN CHILDREN OR OTHERS ARE AROUND.
▪ USE EXTRA CAUTION ON SLOPES. DO NOT MOW SLOPES GREATER THAN 15°. MOW ACROSS, NEVER UP AND DOWN. NEVER PULL MOWER CLOSE TO YOUR FEET. LOOK DOWN AND BEHIND BEFORE AND WHILE MOVING BACKWARDS.
MAX 15°
1595C
READ OPERATOR'S MANUAL. KEEP SAFETY DEVICES (BLADE CONTROL, TRAILING SHIELD, DISCHARGE COVER, ETC.) IN PLACE AND WORKING.

Figure 1 Safety Labels Found On Lawn Mower

SECTION 2: FINDING YOUR MODEL NUMBER

This Operator's Manual is an important part of your new walk behind. It will help you assemble, prepare and maintain your walk behind. Please read and understand what it says.

Before you start to prepare your walk behind for its first use, please locate the model plate and copy the information from it in this Operator's Manual. The information on the model plate is very important if you need help from your dealer or the MTD customer support department.

- Every walk behind has a model plate. You can locate it by standing behind the unit in the operating position and looking down at the rear of the deck.
- The model plate will look like Figure 2

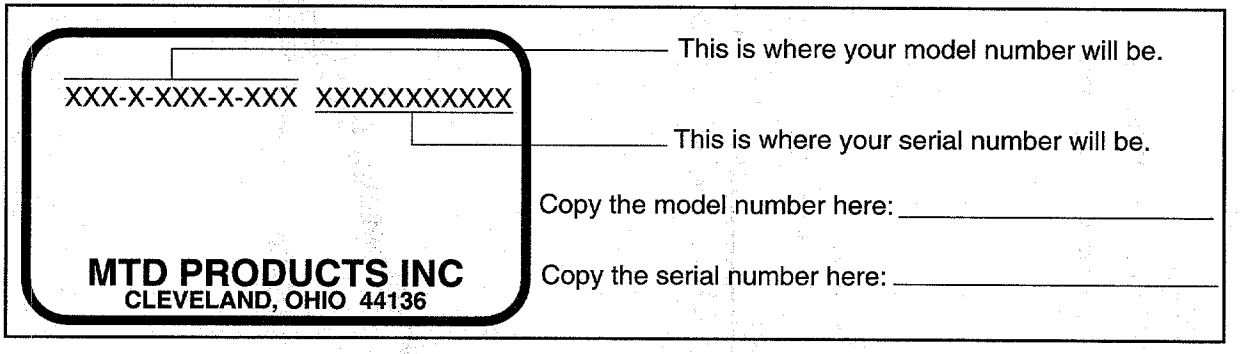

XXX-X-XXX-X-XXX XXXXXXXXXXX
MTD PRODUCTS INC
CLEVELAND, OHIO 44136
This is where your model number will be.
This is where your serial number will be.
Copy the model number here:
Copy the serial number here:

Figure 2

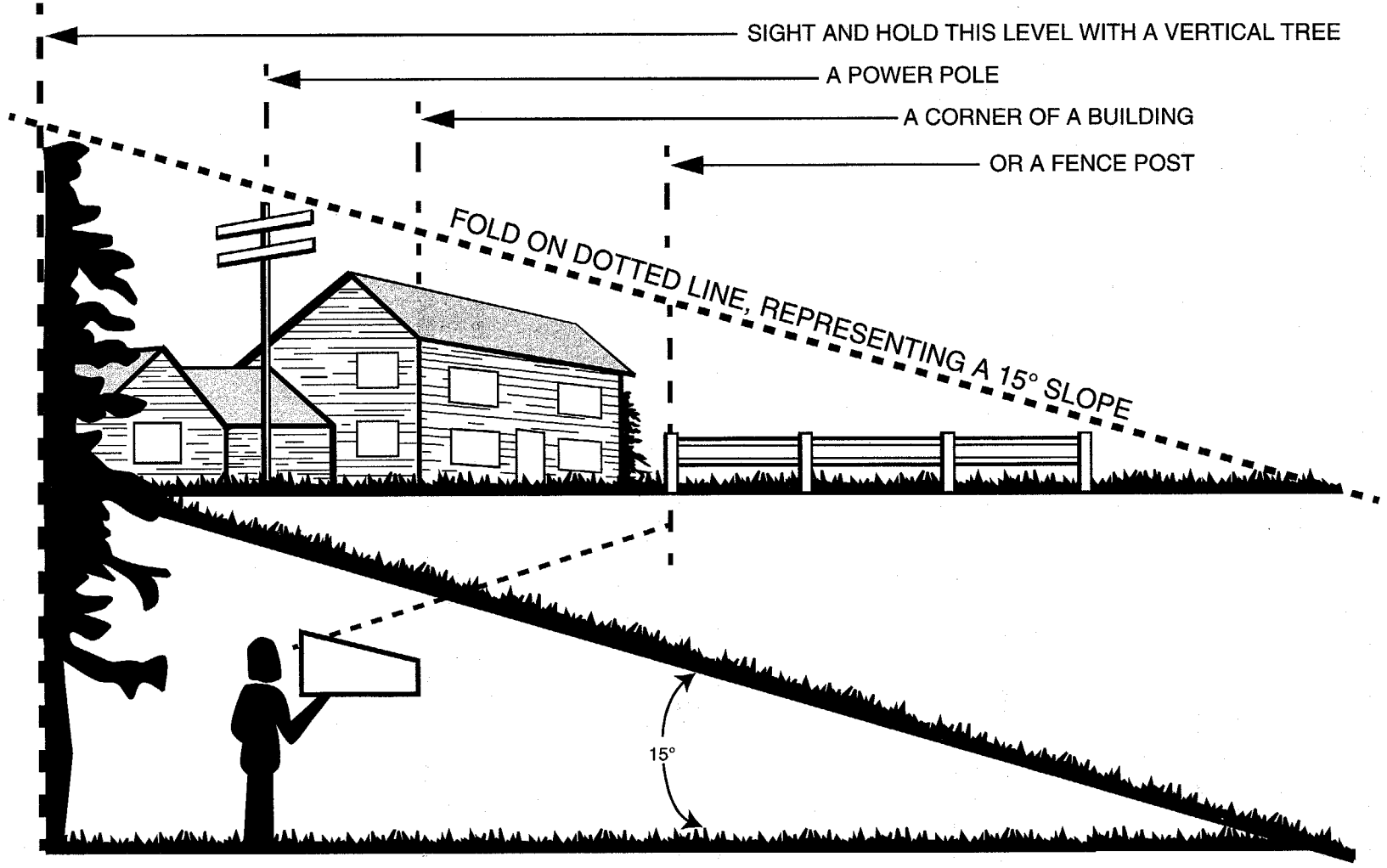
SECTION 3: CALLING CUSTOMER SUPPORT

If you are having difficulty assembling this product or if you have any question regarding the controls, operation or maintenance of this unit, please call the Customer Support Department. You can reach them by calling:

1-800-800-7310

Before you call, make sure that you have your model and serial numbers ready. By having the model and serial numbers ready, you help the Customer Support Representative give you faster service. To find your unit's model and serial number, see SECTION 2: FINDING YOUR MODEL NUMBER.

USE THIS PAGE AS A GUIDE TO DETERMINE SLOPES WHERE YOU MAY NOT OPERATE SAFELY.


SIGHT AND HOLD THIS LEVEL WITH A VERTICAL TREE
A POWER POLE
A CORNER OF A BUILDING
OR A FENCE POST
FOLD ON DOTTED LINE, REPRESENTING A 15° SLOPE
15°

SLOPE GAUGE

WARNING

Do not mow on inclines with a slope in excess of 15 degrees (a rise of approximately 2-1/2 feet every 10 feet). A riding mower could overturn and cause serious injury. If operating a walk-behind mower on such a slope, it is extremely difficult to maintain your footing and you could slip, resulting in serious injury.

Operate RIDING mowers up and down slopes, never across the face of slopes.

Operate WALK-BEHIND mowers across the face of slopes, never up and down slopes.

SECTION 4: UNPACKING

TO REMOVE UNIT FROM CARTON

1. Remove staples, break glue on top flaps, or cut tape at carton end and peel along top flap to open carton.
2. Remove loose parts if included with unit (i.e., grass bag, operator's manual, etc.).
3. Cut along dotted lines and lay carton down flat.
4. Remove packing material.
5. Roll or slide unit out of carton. Check carton thoroughly for loose parts.

TOOLS REQUIRED FOR ASSEMBLY

Pair of Pliers

DISCONNECT SPARK PLUG WIRE

Before setting up your lawn mower, disconnect the spark plug wire from the spark plug, and ground it against the engine. See Figure 3.

NOTE: On engines with a rubber boot, attach rubber boot to a bolt on the engine to ground.

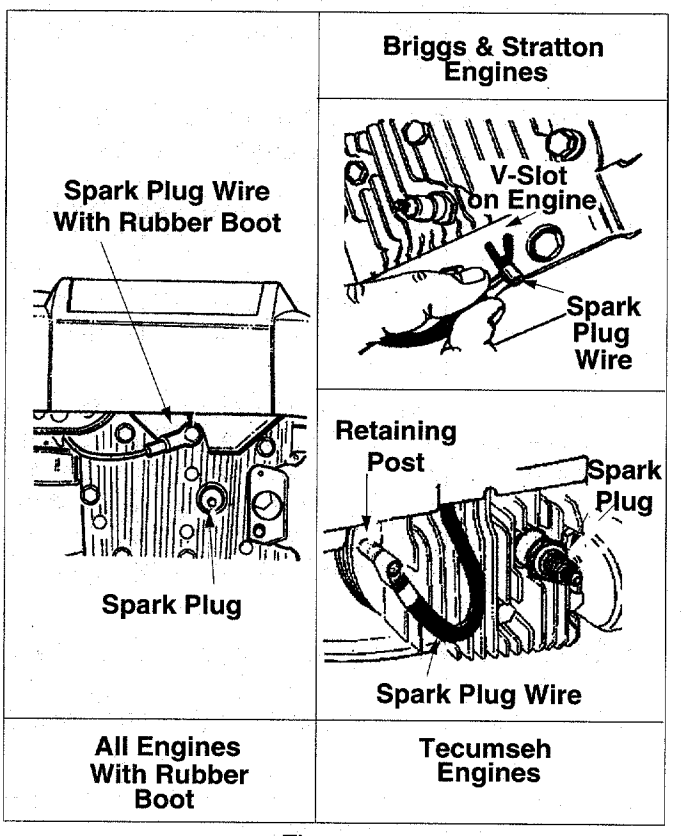
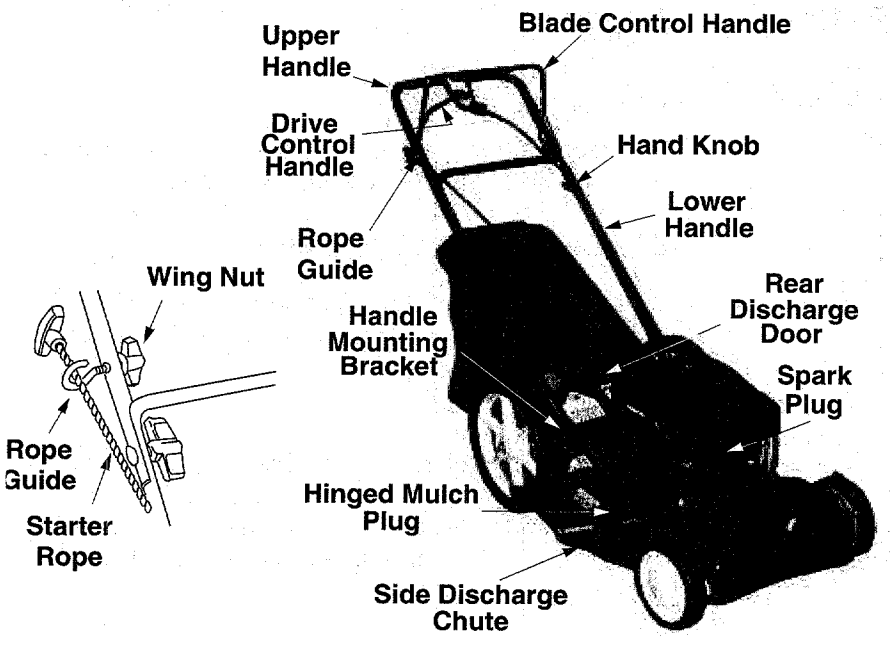


Figure 3



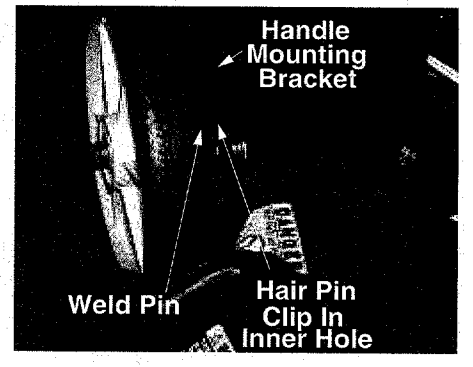


Figure 4

SECTION 5: SET-UP INSTRUCTIONS

IMPORTANT: This unit is shipped WITHOUT GASOLINE or OIL in the engine. Be certain to service engine with gasoline and oil before operating your mower.

NOTE: Reference to right or left hand side of the mower is observed from the operating position.

HOW TO SET-UP YOUR LAWN MOWER

(Refer to Figure 4)

1. Remove any packing material which may be between the upper and lower handles for shipping purposes.
2. Lift up and pull back on the upper handle to raise the handle into the operating position. Make certain the lower handle is seated securely into the handle mounting brackets. Tighten the hand knobs on each side of the handle (carriage bolts must be seated properly into the handle).

NOTE: Your mower is shipped with the handle in the higher height position. If you wish to lower the height of the handle, refer to the Adjustment Section at this time.

3. Remove the hairpin clips from the outer hole in the weld pins on the handle mounting brackets. Using a pair of pliers, squeeze one leg of the lower handle against the handle mounting bracket. Insert the hairpin clip into the inner hole on the weld pin. Repeat on other side.
4. Tighten the cable ties and insert pegs on ties in lower handle holes.

NOTE: Make certain the drive cable is routed around the outside and above the lower handle so it does not interfere with attaching the grass bag.

5. The rope guide is attached to the right side of upper handle. Loosen the wing nut which secures the rope guide.
6. With the spark plug wire disconnected and grounded, hold the blade control handle against the upper handle, and pull the starter rope out of the engine. Release the blade control handle. Slip the starter rope into the rope guide. Tighten the wing nut.
7. Make certain **all** nuts and bolts are tightened securely.

SECTION 6: CONTROLS

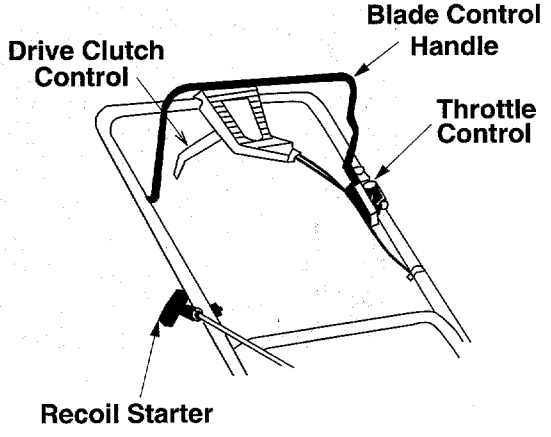


Figure 5

THROTTLE CONTROL

The throttle control is located on the left side of the upper handle. It is used to regulate the engine speed. See Figure 5.

WARNING: The throttle control cannot be used to stop the engine.

NOTE: Your unit may be a constant speed engine, which is set at full throttle for best performance. If your unit is so equipped, no throttle control is required.

RECOIL STARTER

The recoil starter handle is attached to the handle and is used to start the engine. See Figure 5.

BLADE CONTROL HANDLE

WARNING: This control mechanism is a safety device. Never attempt to bypass its operations.

The blade control handle is located on the upper handle of the mower. See Figure 5. The blade control handle must be depressed in order to operate the unit. Release the blade control handle to stop the engine and blade.

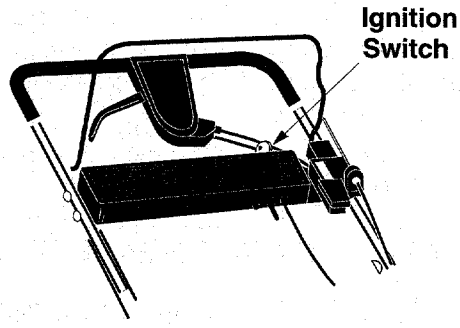
WARNING: The blade will be rotating whenever the engine is running.

DRIVE CLUTCH CONTROL

Squeezing the drive clutch control engages the drive mechanism to the wheels. Releasing the clutch control stops the wheels from driving. Release the drive clutch control to slow down when negotiating an obstacle, making a turn or stopping. See Figure 5.

IGNITION SWITCH

On units with optional electric start, the ignition switch is located on the left side of handle panel. It is used for starting only. See Figure 6.



Electric Start Units Only (Optional)

Figure 6

SECTION 7: OPERATION

WARNING: Keep hands and feet away from the chute area on cutting deck. See Warning Label, Figure 1 on page 4.

WARNING: The operation of any lawn mower can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields. We recommend wide vision safety mask for over spectacles or standard safety glasses.

NOTE: For shipping purposes your mower is set with the wheels in a low cutting height position. For best results raise the cutting position until it is determined which height is best for your lawn. See cutting height adjustment section.

GAS AND OIL FILL-UP

Service the engine with gasoline and oil as instructed in the separate engine manual packed with your mower. Read instructions carefully.

WARNING: Never fill fuel tank indoors, with engine running or until the engine has been allowed to cool for at least two minutes after running.

BEFORE STARTING

Electric Start Units Only (Optional)

Warning: The battery contains corrosive fluid and toxic material—HANDLE WITH CARE. Keep away from children. Do not puncture, disassemble, mutilate or incinerate the battery. Explosive gases could be vented during charging or discharging. Use in a well ventilated area, away from sources of ignition.

CHARGING INSTRUCTIONS

Charge battery for 16 hours before initial use. **Do not charge longer than 20 hours.**

IMPORTANT: Use only the battery charger supplied with this mower.

To charge the battery, remove the protective cap from the end of the battery pack lead. Always plug charger lead into battery pack lead and then insert battery charger plug into 120 volt standard household outlet. See Figure 7. Follow this order of action every time you charge the battery.
After charging, disconnect battery charger plug from household outlet first, then disconnect charger lead from battery pack lead.

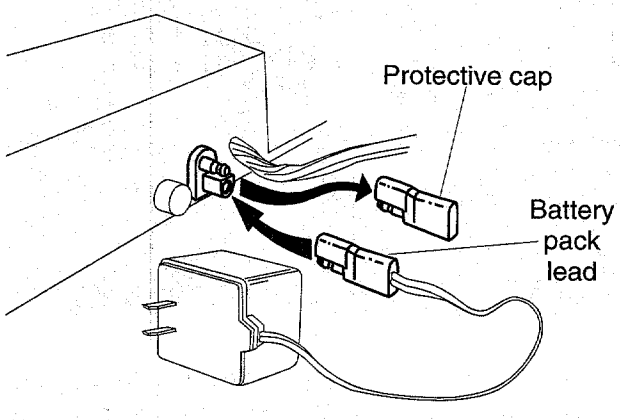


Figure 7

Warning: Do not remove the battery pack from the handle panel for any reason other than replacement. When replacing the battery pack, refer to the instructions in the maintenance section.

All Units:

1. Attach spark plug wire to spark plug. Make certain the metal cap on the end of the spark plug wire is fastened securely over the metal tip on the spark plug.
2. Check for proper drive clutch operation using the NEUTRAL ADJUSTMENT TEST.

START ENGINE AND ENGAGE BLADE

WARNING: When starting the unit for the first time, face the mower against a solid object such as a wall, fence, etc. Start the unit, and if it shows any signs of motion with the drive clutch control disengaged, shut the engine off immediately. Make certain the drive clutch control is adjusted so the drive belt is as loose as possible. Refer to the Adjustment Section.

1. If your unit is equipped with a Throttle Control, move throttle control lever all the way forward.
2. If engine is equipped with a primer, prime engine as instructed in the separate engine manual packed with you unit.
3. Standing behind the unit, depress the blade control handle and hold it against the upper handle. See Figure 8.

Figure 8

4. **Electric Start:** Turn the ignition key to the right to start the engine. Release the key after the engine starts.

   Recoil Start: Grasp starter handle and pull rope out slowly until engine reaches start of compression cycle (rope will pull slightly harder at this point). Let the rope rewind slowly.
5. Pull rope with a rapid, continuous, full arm stroke. Keep a firm grip on starter handle. Return it slowly to the rope guide.
6. After engine starts, move throttle control to desired engine speed. (Mower is designed to be operated at full throttle.)

NOTE: If any problems are encountered, refer to the Trouble Shooting Guide on Page 18.

TO STOP ENGINE AND BLADE

1. Move throttle control lever to the SLOW position.

NOTE: Step 1 is not required with constant speed engine.

2. Release the blade control handle to stop the engine and blade.

WARNING: The blade continues to rotate for a few seconds after the engine is shut off.

3. Disconnect the spark plug wire and ground it against the engine to prevent accidental starting while equipment is unattended.

USING YOUR ROTARY MOWER

WARNING: Never operate your unit without either the rear deflector or entire grass catcher assembly in place.

Be sure that lawn is clear of stones, sticks, wire, or other objects which could damage lawn mower or engine. Such objects could be accidentally thrown by the mower in any direction and cause serious personal injury to the operator and others.

For the best results, do not cut wet grass because it tends to stick to the underside of the mower, preventing proper discharge of grass clippings, and could cause you to slip and fall. New grass, thick grass or wet grass may require a narrower cut. Blade speed should be adjusted to the condition of the lawn.

For a healthy lawn, never cut more than one-third of the total length of the grass at any one cutting. Lawn should be cut in the fall as long as there is growth.

This mower is designed to be operated at full throttle to give you the best cut and do the most effective job of bagging the cut grass.

WARNING: If you strike a foreign object, stop the engine. Remove wire from spark plug, thoroughly inspect the mower for any damage, and repair the damage before restarting and operating the mower. Extensive vibration of the mower during operation is an indication of damage. The unit should be promptly inspected and repaired.

ATTACHING GRASS CATCHER TO MOWER

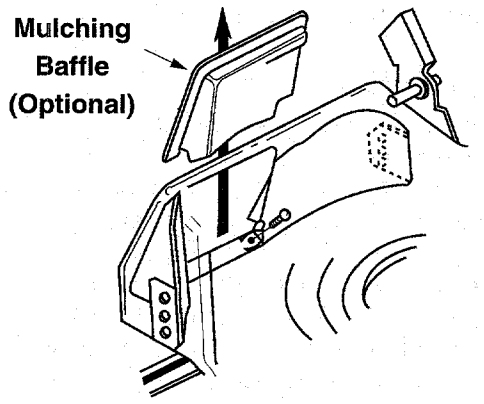


Figure 9

1. If your mower is equipped with a mulching baffle, it is in place on the mower. To remove the mulching baffle, lift the rear discharge door on the mower. Remove the mulching baffle. See Figure 9.
2. Make certain cables are routed to the outside of the handle so they are not in the way when attaching the grass catcher.
3. Place the hooks on the grass catcher frame over the chute door pivot rod. See Figure 10. Release the rear discharge door.

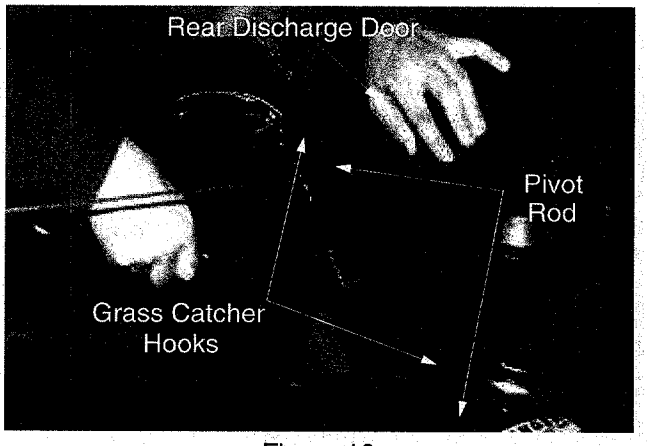


Figure 10

To remove the grass catcher, lift the rear discharge door on the mower. Lift the grass catcher up, off of the pivot rod. Release the rear discharge door. Lift the bag up through the lower handle.

WARNING: Never operate the mower unless the hooks on the grass catcher are seated on the pivot rod, and the rear discharge door rests firmly against the top of the grass catcher or the rear mulch baffle is installed and the rear discharge door rests firmly on the baffle.

CONVERTING TO SIDE DISCHARGE

If your unit is equipped with a side discharge deflector, you can convert to a side discharge mower as follows:

1. Lift the rear discharge door and install the rear mulching plug. See Figure 11.

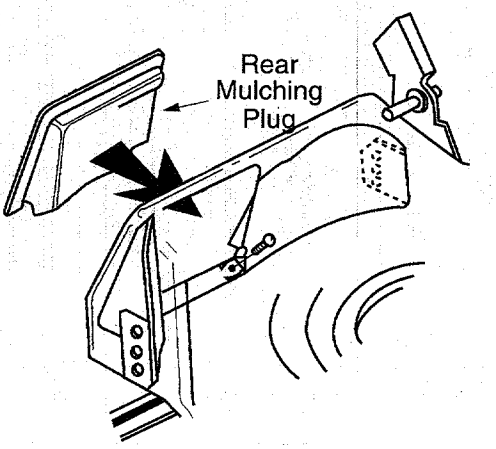


Figure 11

2. On the side of the mower, lift the hinged mulching plug. See Figure 12.

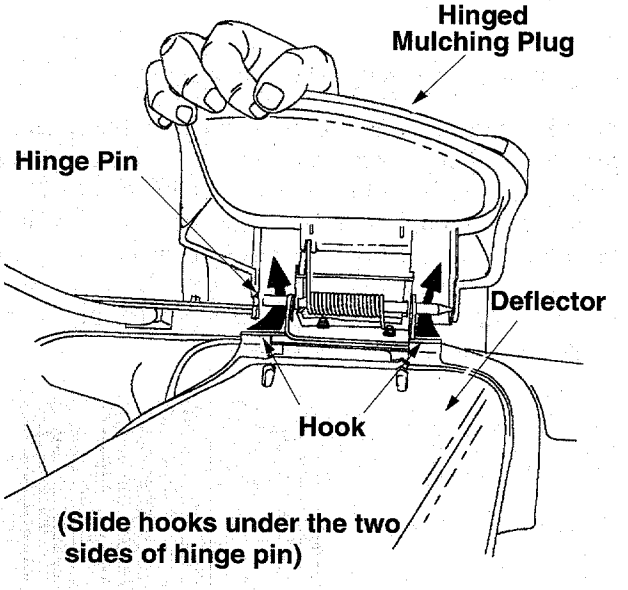


Figure 12

3. Slide the two hooks on the side discharge deflector under the hinge pin on the hinged mulching plug assembly.
4. Lower the hinged mulching plug.

NOTE: Do not remove the hinged mulching plug at an time, even when you are not mulching.

CONVERTING TO A MULCHER

Figure 13

1. If the grassbagger is installed, lift the rear discharge door, remove the grassbagger and install the rear mulching plug. See Figure 11.
2. If the unit was set up for side discharge, lift the hinged mulching plug on the side of the deck and remove the side discharge chute. Lower the hinged mulch plug. See Figure 13.

USING YOUR MULCHER

(Mulching Kit is Optional Equipment)

For effective mulching, do not cut wet grass because it tends to stick to the underside of the deck, preventing proper mulching of grass clippings. New or thick grass may require a narrower cut. The ground speed should be adjusted to the condition of the lawn. If mowing has been delayed and the grass has been allowed to grow in excess of 4", mulching is not recommended. Mow using the grass bag (if so equipped) to reduce the grass height to 3-1/4" maximum before mulching.

SECTION 8: ADJUSTMENTS

WARNING: Do not at any time make any adjustment to lawn mower without first stopping engine and disconnecting spark plug wire.

CUTTING HEIGHT ADJUSTMENT

An adjusting plate and lever at each wheel position provides cutting height adjustment. Each adjusting plate has nine height positions. Height of cut will be changed when the lever is moved from one position to another. Simply depress the lever towards wheel and move wheel and lever assembly to desired position. All wheels must be placed in the same relative position. See Figure 14.

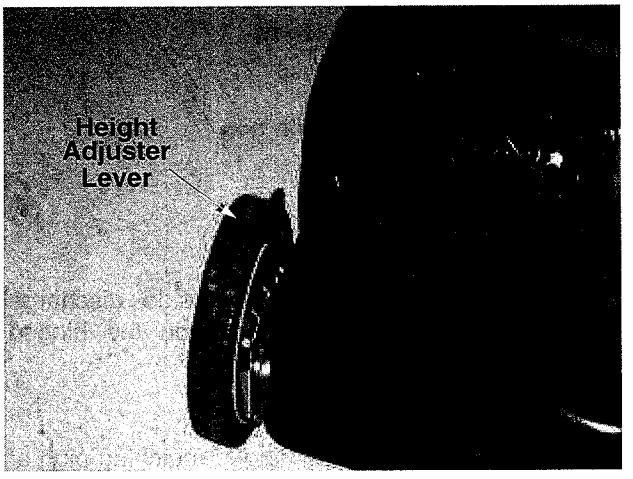


Figure 14

HANDLE HEIGHT ADJUSTMENT

Your mower is shipped with the handle in the higher height position. To lower the handle height, proceed as follows

.

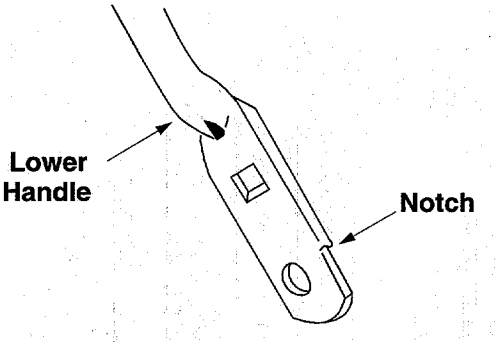


Figure 15

1. Remove the starter rope from the rope guide.
2. Remove the upper handle by removing the hand knobs and carriage bolts. Lay the upper handle out of the way, being careful not to bend or kink the cables.
3. Remove the hairpin clips from the weld pins on the handle brackets. Press outward on the legs of the lower handle, and remove it from the mower.

4. Turn the lower handle around so the notches on the bottom of the lower handle are facing forward as shown in Figure 15. Reassemble, placing the bottom holes in the handle over the weld pins in the handle mounting bracket.
5. Reassemble the upper handle.
6. Place the hairpin clips in the inner holes in the weld pins and attach the starter rope as instructed in the Set-Up Instructions.

THROTTLE CONTROL ADJUSTMENT

NOTE: Your unit may be a constant speed engine, which is set at full throttle for best performance. This engine requires no throttle adjustment.

If you have a unit with a the throttle control which needs adjustment or if it has been replaced, adjust as follows.

1. Remove the screw shown in Figure 16. Remove the cable clamp from the cable.

NOTE: If you have a Tecumseh engine, simply loosen the screw shown in Figure 17 so the cable will move freely beneath the clamp. It is not necessary to remove the screw and clamp completely.

2. Push the throttle control lever on the handle all the way forward as far as it will go, then back it off **one "click."** Make certain the throttle control lever remains in this position.
3. Push the control lever on the engine as far toward the **rear** of the engine as it will go. Secure the cable in this position with the cable clamp and screw.

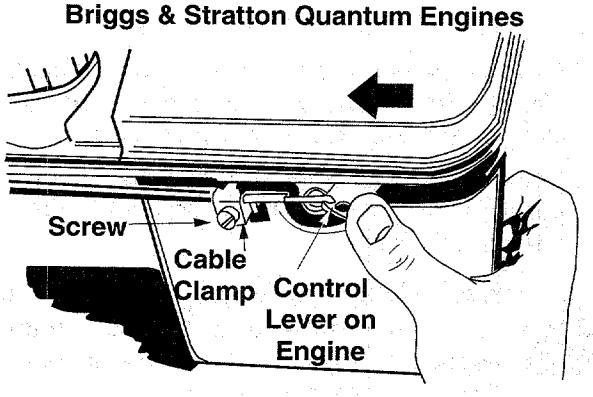


Figure 16

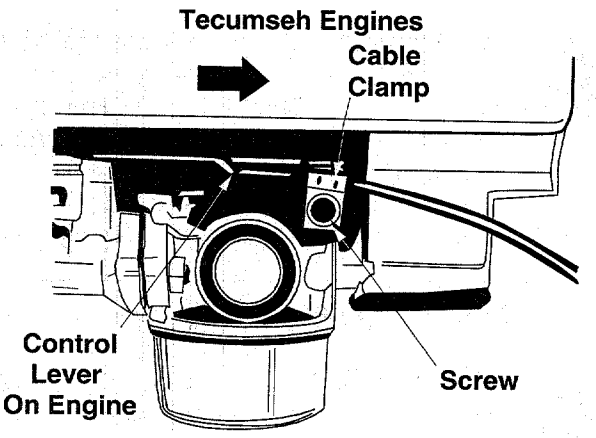


Figure 17

DRIVE CLUTCH ADJUSTMENT

The drive clutch control adjustment wheel is located in the drive clutch control handle housing and is used to tighten or loosen the drive belt. You will have to adjust the drive clutch control if any of the following happens:

- The mower does not propel itself with the drive clutch engaged.
- The mower's drive wheels hesitate with the drive clutch engaged.

To resolve the above problems, rotate the adjustment wheel with your fingers. Clockwise to tighten the cable and counter-clockwise to loosen the cable. See Figure 18.

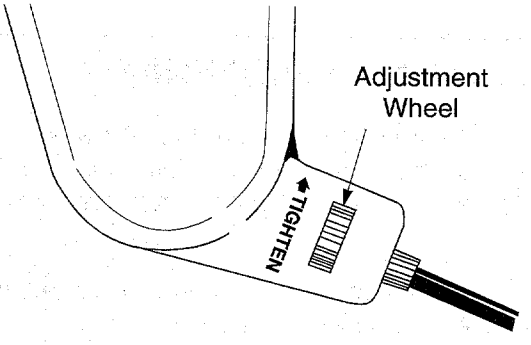


Figure 18

NOTE: For some people the drive clutch handle may not be in a comfortable position. You can adjust the handle out by tightening the adjustment wheel.

CARBURETOR ADJUSTMENTS

WARNING: If any adjustments are made to the engine while the engine is running (e.g. carburetor), keep clear of all moving parts. Be careful of heated surfaces and muffler.

Minor carburetor adjustments may be required to compensate for differences in fuel, temperature, altitude and load. To adjust carburetor, refer to the separate engine manual packed with your mower.

NOTE: A dirty air cleaner will cause an engine to run rough. Be certain air cleaner is clean and attached to the carburetor before adjusting carburetor.

SECTION 9: LUBRICATION

WARNING: Always stop engine and disconnect spark plug wire before cleaning, lubricating or doing any kind of work on lawn mower.

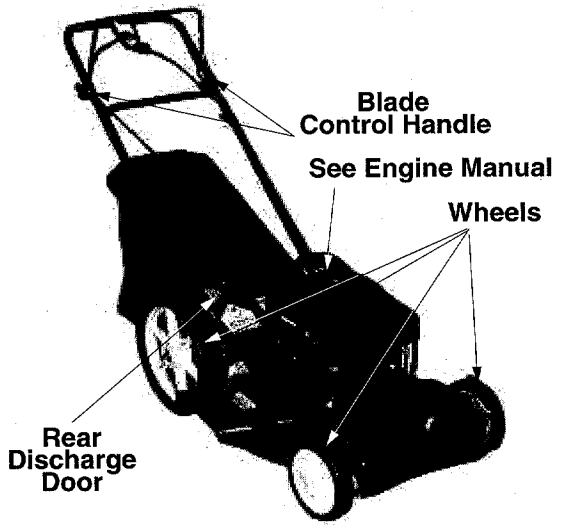


Figure 19

Blade Control: Lubricate the pivot points on the blade control handle and the brake cable at least once a season with light oil. See Figure 19. The blade control must operate freely in both directions.

Rear Discharge Door: The torsion springs and pivot points should be lubricated periodically with light oil to prevent any rust or binding. Door must work freely.

Wheels: The wheels require no lubrication. However, if the wheels are removed for any reason, lubricate the surface of the axle bolt and the inner surface of the wheel with light oil. Engine oil may also be used.

Engine: Follow engine manual for lubrication instructions.

SECTION 10: MAINTENANCE

WARNING: Be sure to disconnect and ground the spark plug wire before performing any repairs or maintenance.

NOTE: When tipping the unit, empty the fuel tank and keep engine spark plug side up.

TROUBLE SHOOTING

Refer to page 18 of this manual for trouble shooting information.

CUTTING BLADE

When removing the cutting blade for sharpening or replacement, protect hands by using heavy gloves or a rag to grasp the cutting blade.

1. Remove the bolt and bell washer which hold the blade-pulley assembly to the engine crankshaft. Remove the assembly from the crankshaft.
2. Remove the two bolts and lock nuts from the assembly and remove the blade from the blade adaptor and pulley.

WARNING: Periodically inspect the blade adapter and pulley for cracks, especially if you strike a foreign object. Replace when necessary.

When sharpening the blade, follow the original angle of grind as a guide. It is extremely important that each cutting edge receives an equal amount of grinding to prevent an unbalanced blade. An unbalanced blade will cause excessive vibration when rotating at high speeds, may cause damage to the mower and could break, causing personal injury.

The blade can be tested by balancing it on a round shaft screwdriver. Remove metal from the heavy side until it balances evenly. It is recommended that the blade always be removed from the adapter for the best test of balance.

Before reassembling the blade-pulley assembly to the unit, lubricate the engine crankshaft and the inner surface of the blade adapter with light oil (or engine oil). Lubricating the bolt holes, bolts and inner surface of the nuts is also recommended.

INSTALLING THE BLADE

1. Install the blade adapter in the pulley with the "star" away from the pulley. Refer to Figure 20.
2. Place the blade on the adapter with the side of he blade marked bottom (or with part number) facing away from the adapter.
3. Secure the blade to the assembly with two hex bolts and lock nuts. Tighten the hex bolts to the torque listed in the "Blade Mounting Torque" Section below.
4. Install the blade assembly up on the crankshaft. Secure with the hex bolt and bell washer (cupped side of washer to blade) and tighten to torque listed in the "Blade Mounting Torque" section below.

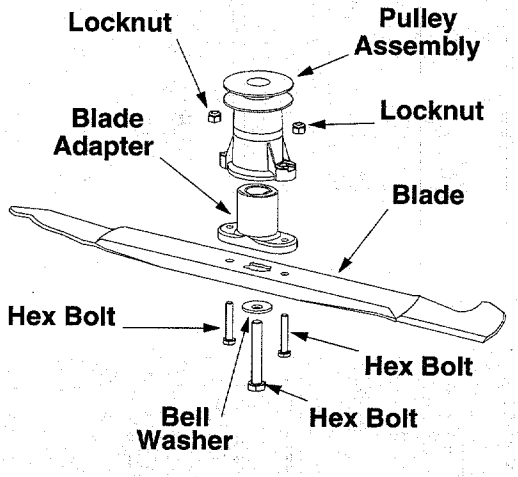


Figure 20

Blade Mounting Torque

Blade Adapter Bolts:120 in. lbs. min., 150 in. lbs. max.
Center Bolt: 450 in. lbs. min., 600 in. lbs. max.

To ensure safe operation of your unit, **all** nuts and bolts must be checked periodically for correct tightness.

DECK

The underside of the mower deck should be cleaned after each use to prevent a buildup of grass clippings, leaves, dirt or other matter. If this debris is allowed to accumulate, it will invite rust and corrosion, and may cause an uneven discharge of grass clippings at the next cutting.

The deck may be cleaned by tilting the mower and scraping clean with a suitable tool (make certain the spark plug wire is disconnected).

BATTERY PACK REPLACEMENT

(Electric Start Units Only)
Remove the battery pack from the handle panel for replacement only. Do not separate the batteries for any reason. Dispose of batteries properly.

Warning: Batteries contain sulfuric acid which may cause burns. Do not short circuit or mutilate batteries in any way. Do not put batteries in fire as these may burst or release toxic materials.

When replacing battery pack in handle panel, battery pack must be positioned with the positive terminal to the right hand side and the negative terminal to the left hand side of panel. Replacing the battery pack incorrectly will cause serious damage. The positive lead on the wire harness has the smaller connector. Connect the positive lead to the positive side of the battery pack, then connect the negative side.
In-line Fuse: The unit is equipped with an in-line fuse. If the unit fails to start, check the fuse inside the battery cover by turning the end of the fuse holder and removing from the battery cover. Replace with standard automotive 7-1/2 amp fuse.

STORAGE OF THE BATTERY

The battery must be stored with a full charge. A discharged battery will freeze.

IMPORTANT: All batteries discharge during storage. Recharge battery every two months and before returning to service. Refer to charging instructions in OPERATION section.

ENGINE

Refer to the separate engine manual for engine maintenance instructions.

Maintain **engine oil** as instructed in the separate engine manual packed with your unit. Read and follow instructions carefully.

Service **air cleaner** every 25 hours under normal conditions. Clean every few hours under extremely dusty conditions. Poor engine performance and flooding usually indicates that the air cleaner should be serviced. To service the air cleaner, refer to the separate engine manual packed with your unit.

The **spark plug** should be cleaned and the gap reset once a season. Spark plug replacement is recommended at the start of each mowing season; check engine manual for correct plug type and gap specifications.

Clean the engine regularly with a cloth or brush. Keep the cooling system (blower housing area) clean to permit proper air circulation which is essential to engine performance and life. Be certain to remove all grass, dirt and combustible debris from muffler area.

REAR FLAP REPLACEMENT

The rear flap is attached to the back of the mower deck, and is designed to minimize the possibility that objects will be thrown from the rear of the mower toward the operator. If the rear flap becomes damaged, replace as follows.

To remove the old rear flap, cut off the flat end of the wire rod which secures it to the deck using a pair of side-cutters. Attach the new rear flap using the new rod provided with the rear flap, bending the ends of the rod over to secure.

BELT REMOVAL AND REPLACEMENT

1. Remove the two shoulder screws from on top of the deck which secures the belt guard to the mower deck. See Figure 21.

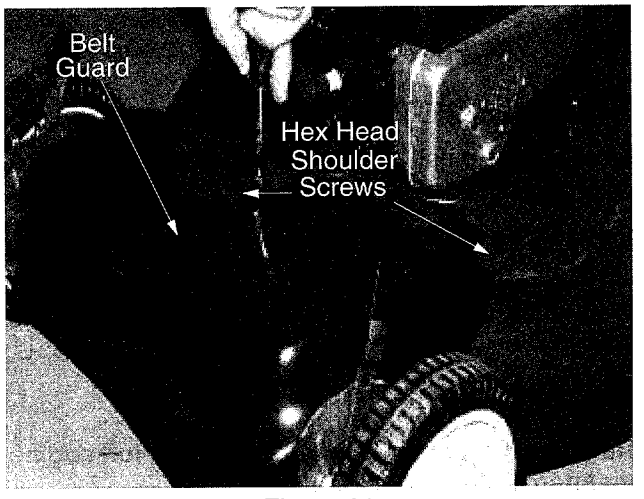


Figure 21

2. Remove the belt guard from the unit by lightly pressing inward on the sides of the belt guard. This will release the tabs that secure the belt guard to the height adjuster brackets. See Figure 22.

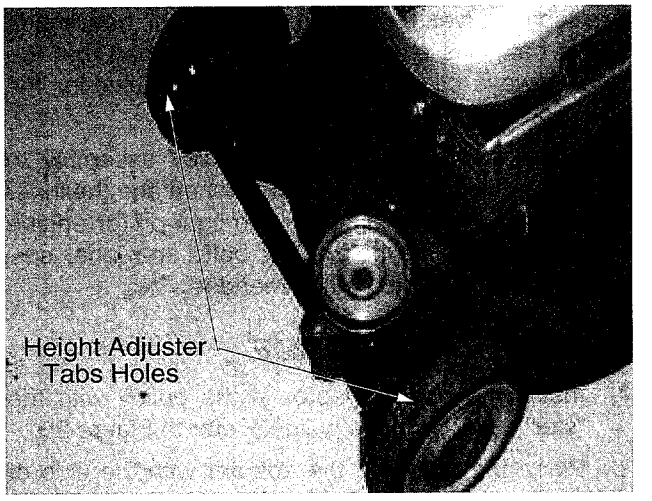


Figure 22

3. Remove the idler from idler bracket using 7/16" wrench and socket. See Figure 23.

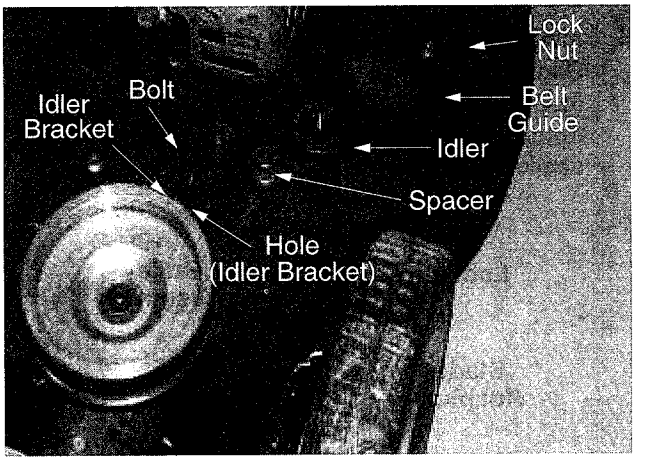


Figure 23

4. Remove the belt from the transmission. See Figure 24.

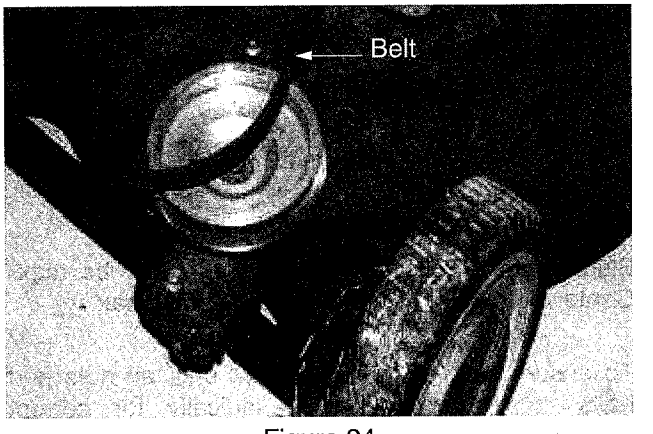


Figure 24

5. Remove the belt from the engine pulley and around the blade. See Figure 25.
6. Reassemble in reverse order with new belt (Part No. 754-0465).

NOTE: Begin Idler reassembly by inserting bolt up through the Idler bracket hole.

7. Adjust the Drive Clutch as instructed in Drive Clutch Adjustment Section.

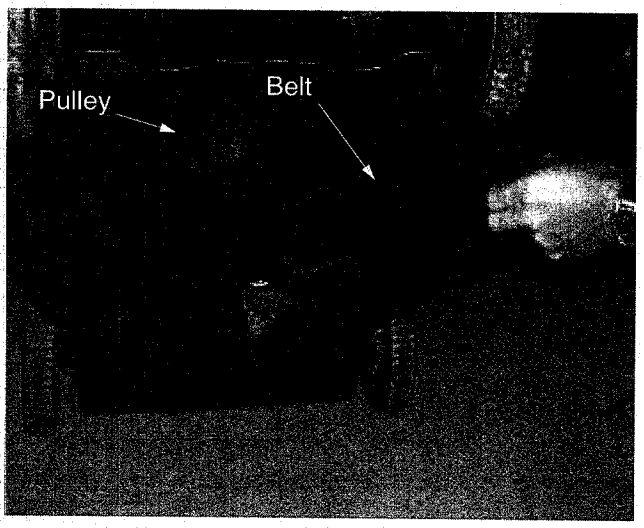


Figure 25

SECTION 11: OFF-SEASON STORAGE

The following steps should be taken to prepare lawn mower for storage.

1. Clean and lubricate mower thoroughly as described in the lubrication instructions.
2. Refer to engine manual for correct engine storage instructions.
3. Coat mower's cutting blade with chassis grease to prevent rusting.
4. Follow battery storage instructions on page 15 (Electric Start Units Only).
5. Store mower in a dry, clean area. Do not store next to corrosive materials, such as fertilizer.

NOTE: When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rust-proof the equipment. Using a light oil or silicone, coat the equipment, especially cables and all moving parts.

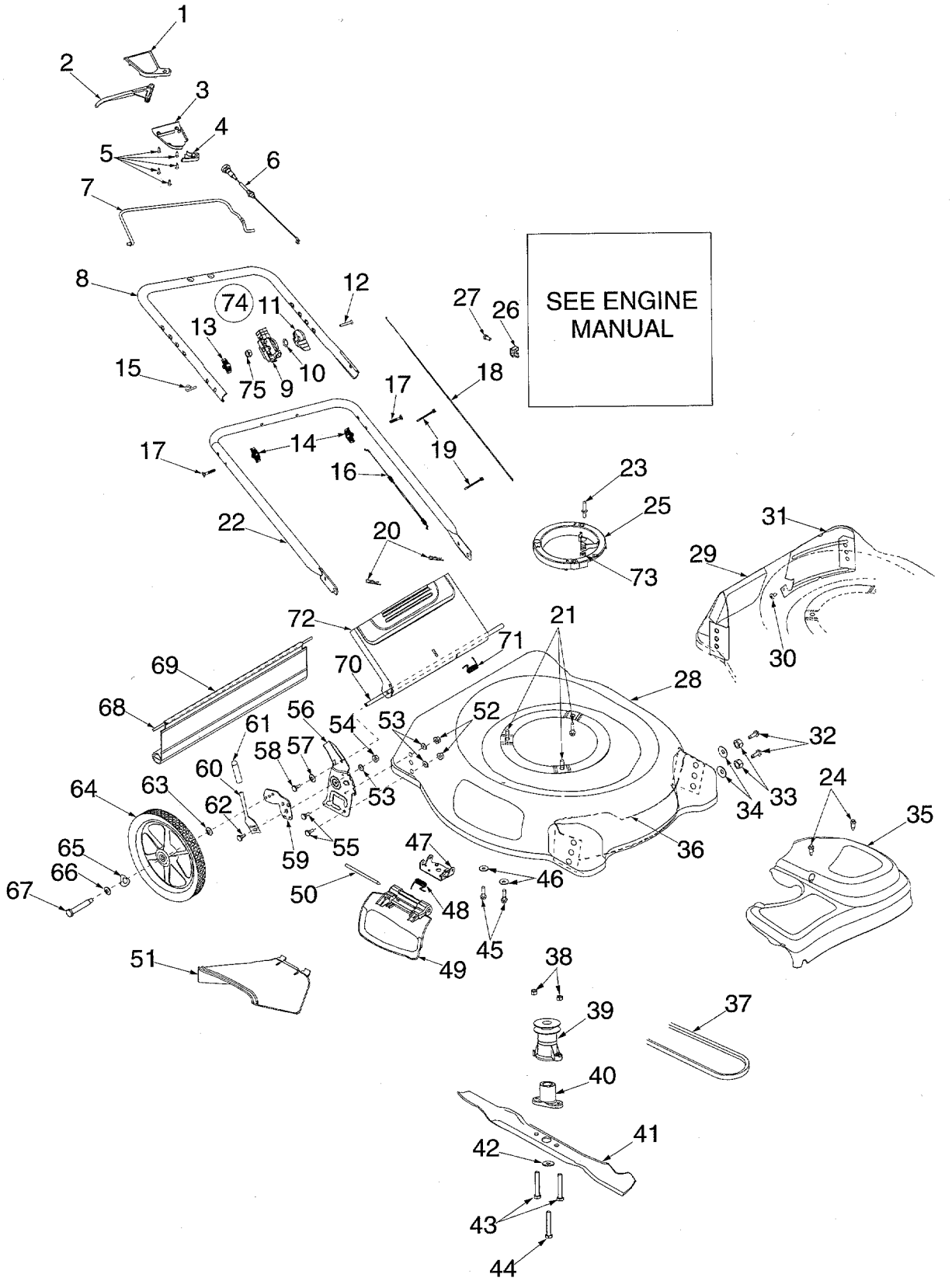
SECTION 1: TROUBLE SHOOTING GUIDE

Trouble	Possible Cause(s)	Corrective Actions
Engine fails to start	Blade control handle disengaged.	Engage blade control handle.
	Spark plug wire disconnected.	Connect wire to spark plug.
	Dirty aircleaner.	Refer to the engine manual packed with your unit.
	Primer button not depressed.	Refer to the engine manual packed with your unit.
	Throttle control lever not in correct starting position (if so equipped).	Move throttle lever to FAST or START position.
	Fuel tank empty or stale fuel.	Fill tank with clean fresh gasoline. Fuel will not last over thirty days unless a fuel stabilizer is used.
	Blocked fuel line (if so equipped).	Clean fuel line.
	Faulty spark plug.	Clean, adjust gap or replace.
	Engine flooded.	Refer to the engine manual packed with your unit.
Engine runs erratic	Unit running in START position.	Move throttle lever to FAST position.
	Spark plug wire loose.	Connect and tighten spark plug wire. Check spark plug for fouling.
	Blocked fuel line (if so equipped) or stale fuel.	Clean fuel line; fill tank with clean, fresh gasoline. Fuel will not last over thirty days unless a fuel stabilizer is added.
	Vent in gas cap plugged.	Clear vent or threads or replace.
	Water or dirt in fuel system.	Drain fuel tank. Refill with fresh fuel.
	Dirty air cleaner.	Refer to the engine manual packed with your unit.
	Carburetor out of adjustment.	Refer to the engine manual packed with your unit.
Engine overheats	Engine oil level low.	Fill crankcase with proper oil.
	Dirty aircleaner.	Refer to the engine manual packed with your unit.
	Air flow restricted.	Stop engine and disconnect spark plug wire. Remove blower housing and clean.
	Carburetor not adjusted properly.	Refer to the engine manual packed with your unit or see an authorized service dealer.*
Occasional skip (hesitates) at high speed	Spark plug gap too close.	Adjust gap to .030".
	Carburetor idle mixture adjustment improperly set.	Refer to the engine manual packed with your unit.
Idles poorly	Spark plug fouled, faulty or gap too wide.	Reset gap to .030" or replace spark plug.
	Carburetor improperly adjusted.	Refer to the engine manual packed with your unit.
	Dirty air cleaner.	Refer to the engine manual packed with your unit.
Excessive vibration	Cutting blade loose or unbalanced.	Tighten blade and adapter. Balance blade.
	Bent cutting blade.	See an authorized service dealer.
Mower will not mulch grass	Engine speed too low.	Set throttle between 3/4 and full throttle.
	Wet grass.	Do not mow when grass is wet; wait until later to cut.
	Excessively high grass.	Mow once at a high cutting height, then mow again at desired height or make a narrower cutting swath (1/2 width).
Uneven cut	Wheels not positioned correctly.	Place all four wheels in same height position.
	Dull blade.	Sharpen or replace blade.
Wheels will not propel	Belt not installed properly.	Check belt for proper pulley installation and movement.
	Debris clogging mechanism.	Clean out debris.

Note: For repairs beyond the minor adjustments above, contact your local authorized service dealer.

Notes

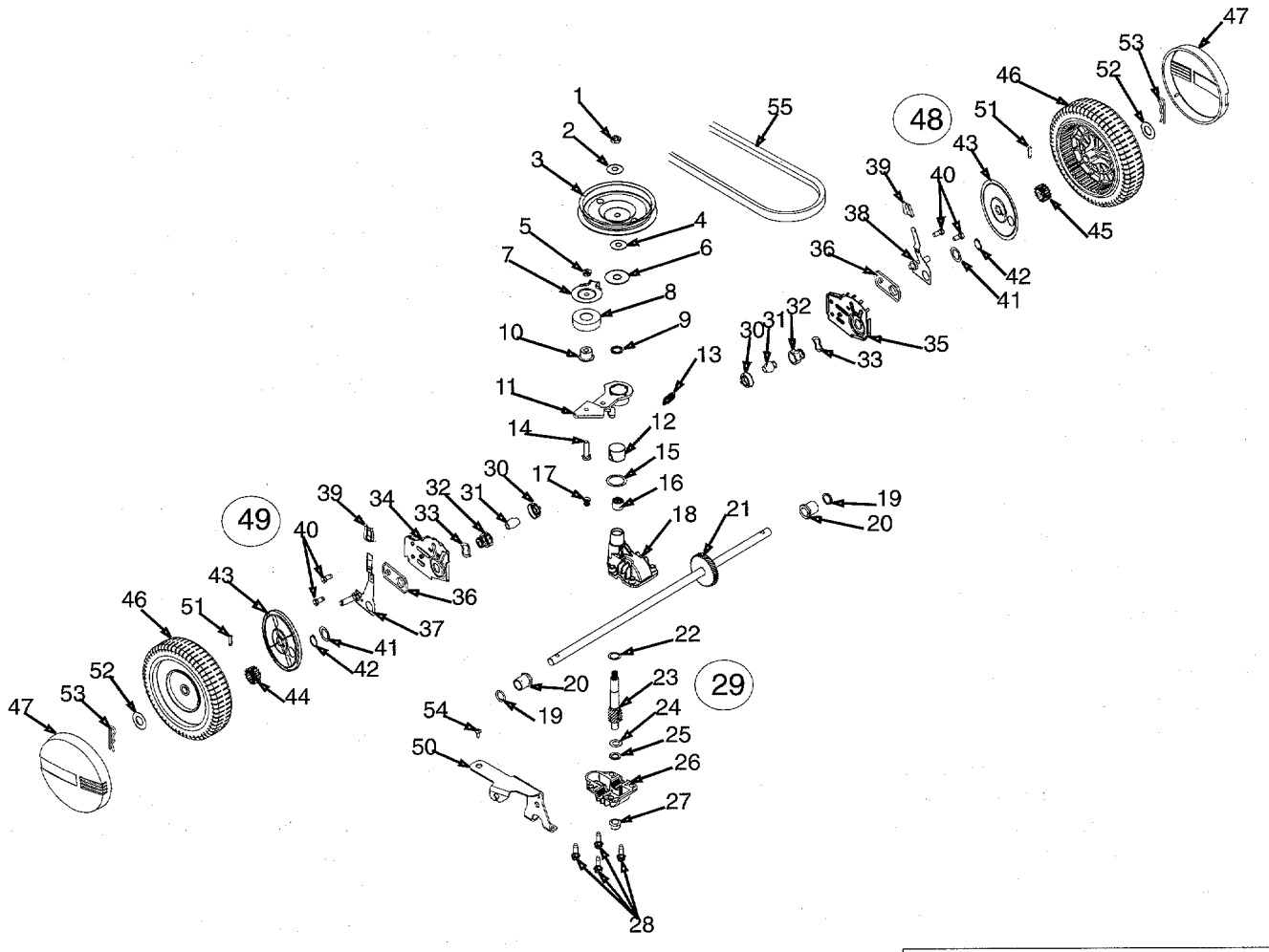
Model 560 Series



Model 560 Series

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	731-1057	Upper Drive Cover	38	712-0324	Hex Lock Nut 1/4-20
2	731-0620	Drive Lever	39	756-1146	Drive Pulley
3	731-1058	Lower Drive Cover	40	753-0825	Blade Adapter Kit (Incl. Ref. 38,42,43,44)
4	731-1059	Mounting Cap	41	742-0741	21" Mulching Blade
5	710-0841	Screw #10-12:.75	42	736-0452	Bell Washer .396 I.D. x 1.140 O.D. x .095
6	746-0960	Drive Cable	43	710-0606	Hex Screw 1/4-20 x 1.50
7	747-0824	Control Lever	44	710-1257	Hex Screw 3/8-24 x 2.50
	647-0004	Deluxe Control Lever	45	710-0599	Tapp Screw 1/4-20 x .500
8	749-0439B	Upper Handle	46	736-0270	Bell Wash .265 x .75 x .062
9	746-0875	Throttle Hsg.	47	782-7006	Hinged Mounting Bracket
10	736-0501	Curved Washer .663 x .980 x .014	48	732-0731	Torsion Spring .290 ID x 1.95
11	746-0876	Throttle Lever	49	682-7000	Mulch Plug Ass'y.
12	710-0605	Screw Oval C-Sunk 1/4-20 x 1.81	50	747-0710	Hinge Pin
13	720-0279	Knob	51	731-1409	Chute Deflector
14	720-0276	Knob	52	712-0798	Hex Nut 3/8-16
15	710-1205	Eye Bolt 1/4-20	53	736-0356	Bell Wash .39 ID x 1.38 OD
16	746-0843	Throttle Cable: 55" B&S	54	712-3005	Hex Flange Lock Nut 3/8-16
	746-0847	Throttle Cable: 42"Tec	55	710-0896	Hex Screw w/wash 1/4-14 x .625
17	710-1174	Carriage Bolt 5/16-18 x 2.0	56	682-3056	Handle Bracket Ass'y RH
18	746-0550	Control Cable: 39" B&S		682-3057	Handle Bracket Ass'y LH
	746-0737	Control Cable: 51" Tec	57	736-0270	Bell Wash .265 x .75 x .062
19	726-0240	Tie Cable	58	710-0599	Hex Screw TT 1/4-20 x .500
20	714-0104	Cotter Pin	59	17488	Pivot Bar RH
21	710-1008	Tapp Screw w/ Hex Lock Wash		17489	Pivot Bar LH
22	749-0907A	Handle - Lower	60	732-0866	Height Adj Lever
23	711-1293	Pin-Belt Keeper	61	720-0312	Foam Grip
24	7510042824	Screw #12 x .457	62	738-0507B	Shldr Screw .500 Dia x .434
25	631-0075	Engine Spacer	63	736-0105	Wash. .401 x .870 x .063
26	751B213146	Cable Clamp (B&S)	64	734-1860	Wheel Comp. 14 x 2 Yellow Link Tread
	7510007775	Cable Clamp (Tec)		734-1861	Wheel Comp. 14 x 2 Gray Link Tread
27	710-1237	Hex Screw: T: #10-32 x .625 Lg. (B&S)		734-1864	Wheel Comp. 14 x 1.8 Gray Bar Tread
	710-0871	Hex Screw: #10-32 x .38 Lg. (Tec)	N/I	741-0484	Bearing (2 per Wheel - Incl. w/No. 64)
28	782-0082	21" RD Deck	65	736-0182	Spring Washer .50 ID x 1.0 OD
29	782-5004	Rear Baffle Right	66	736-0456	Flat Washer .510 x 1.373 x .04
30	710-1017	Scr:AB:1/4-14:.625:Trustrx	67	738-0481	Shldr Screw .500 x 2.62 3/8-16
31	782-5003	Rear Baffle Left	68	732-0700	Wire
32	710-0216	Hex Screw 3/8-16 x .75	69	731-1236	Rear Flap
33	736-0331	Bell Wash .39 x 1.13 x .062	70	747-0996	Pivot Rod
34	712-0798	Hex Nut 3/8-16	71	732-0809	Torsion Spring
35	731-1936	Trans Cover - Black	72	782-7599A	RD Door
	731-1937	Trans Cover - Yellow	73	712-0271	Hex Nut 1/4-20 Thread
	731-2101	Trans Cover - Gray	74	811-00185	Throttle Body Comp. (Incl. Ref. 9,10,11,12,75
36	782-5002	Front Baffle	75	712-0324	Hex Lock Nut, 1/4-20 Thd.
37	754-0465	V Belt			

Model 560 Series



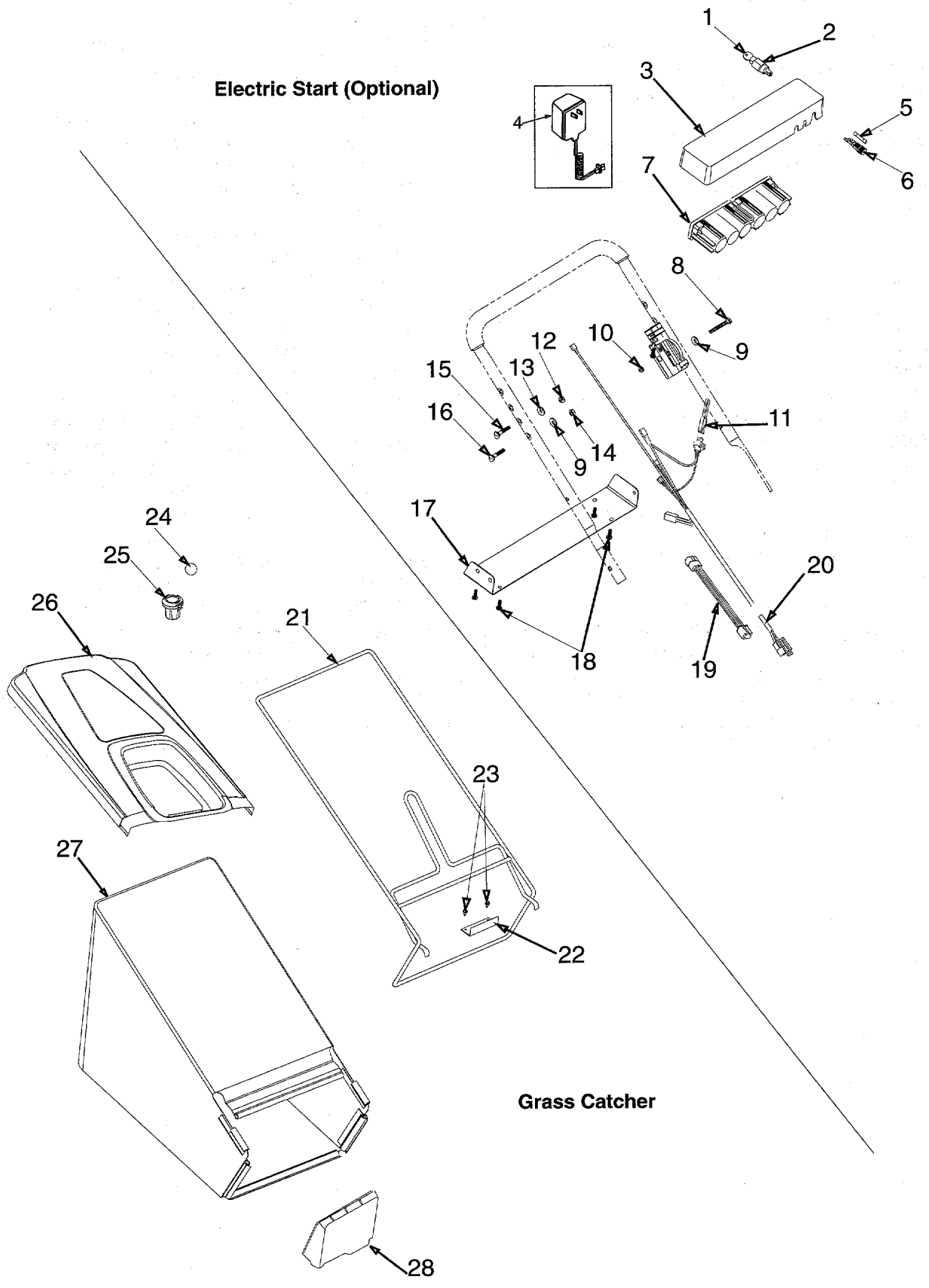
IMPORTANT: For a proper working machine, use Factory Approved Parts.

V-BELTS are specially designed to engage and disengage safely. A substitute (non OEM) V-Belt can be dangerous by not disengaging comletely.

Model 560 Series

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	712-3025	Hex Jam Nut 5/16-24	31	741-0604	Bearing Sleeve .50 I.D.
2	736-0425	Bell Wash .325 x .930 x .045	32	748-0355	Bearing Support
3	756-1042	Pulley	33	736-0447	Wave Washer 1.5 x 1.0 x .029
4	736-0425	Bell Wash .325 x .930 x .045	34	782-0512B	Height Adj. Plate: RH
5	712-0896	Hex Nut 1/4 - 28 Lock	35	782-0511A	Height Adj. Plate: LH
6	736-0406	Flat Wash .442 x 1.38 x .060	36	682-0509	Pivot Plate Asm.
7	782-7598	Belt Keeper	37	732-0706	Front Lever R.H
8	741-0124	Ball Bearing	38	732-0707	Front Lever L.H.
9	721-0457	Oil Seal	39	720-0190	Knob
10	750-1050	Flange Spacer	40	710-0216	Hex Cap Screw 3/8-16 x .75
11	682-0028	Idler Bracket Ass'y	41	736-0474	Washer DD 1.5" O.D.
12	741-0682A	Bearing Sleeve	42	716-0102	Snap Ring 1.0 Dia
13	732-0849A	Wash:Flat:.504 x .700 x .030	43	782-7551	Wheel Dust Cap
14	710-0299	Hex Cap Screw 1/4-28 x 1.00 Gr. 5	44	717-1534	Gear 14T RH Fwd
15	736-0570	Flat Washer .865 x 1.145 x .030	45	717-1533	Gear 14T LH Fwd
16	741-0699	Needle Bearing .438 x .625 x .500	46	734-1868	Whl:Compl:8x2 Link Grey Fwd
17	721-0325	Plug 1/4 x .437		734-1866	Whl:Compl:8x2 Link Yellow Fwd
18	618-0300	Housing Asm:Upper:(Incl. #16)		634-0021A	Whl 8x1.75 Disk Bar Gray Sleev S
19	721-0329	Seal:Oil:.500x .687 x .094	47	731-0981A	Hubcap:Whl:Radial Spoke Grey
20	741-0673	Flange Bearing .503 x .689 x .792		720-0249	Hubcap:Euro:Grey
21	611-0105	Output Shaft		731-0982A	Hubcap:Whl:Radial Spoke Beige
22	736-0520	Flat Washer .504 x .700 x .030	48	682-0512A	Height Adj. Complete RH
23	717-1492	Pinion Shaft 10T.	49	682-0511A	Height Adj. Complete LH
24	736-0314	Thrust Washer .375 x .70 x .030	50	682-0030	Cable Idler Bracket
25	736-0569	Thrust Washer .388 x .625 x .062	51	715-0221	Dowel Pin
26	618-0299	Housing:Lwr: (Includes #27)	52	736-3013	Flat Washer 1/2 x 1.00 x .063
27	741-0672	Flange Bearing .378 x .531 x .370	53	714-0101	Cotter Pin .08 x 1.42
28	710-1276	Hex Screw w/Wash 1/4-20 x .750	54	738-1002	Screw, Shoulder .375 x .25AB: 1/4-20 Thd.
29	618-0298	Transmission-Complete (Incl. 1 thru 30)	55	754-0465	"V" - Belt
30	732-0708	Bearing Retainer			

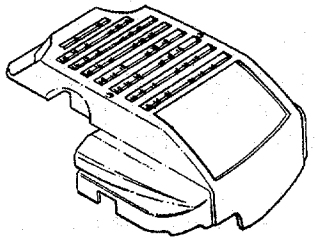
Model 560 Series



Model 560 Series

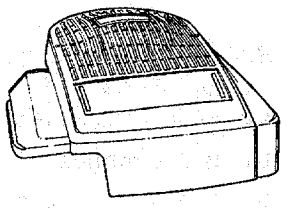
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	725-0201	Ignition Key	17	782-9012	Lower Battery Tray
2	725-0873	Key Switch	18	710-0969	Tapp Screw
3	731-0891A	Battery Tray	19	725-1538	Harness Extension
4	725-0727	Battery Charger	20	725-1442	Harness
5	725-0298	Fuse 7.5 Amp	21	747-0995	Catcher Frame
6	725-1428	Fuse Holder	22	782-9050	Mounting Bracket
7	725-1276	Battery 12V	23	710-0896	Hex Screw 1/4 -14 .625
8	710-0501	Hex Screw:1/4-20:2.0	24	731-1644	Flow Ball
9	736-0270	Bell Washer .265 x .75 x .062	25	631-0060	Indicator Flow Assembly
10	712-0329	Special Hex Nut 5/16-18	26	731-0066	Hard Top Cover w/Logo
11	725-1206	Plug		731-0068	Hard Top Cover
12	712-0267	Nut 5/16-18		631-0077	Hard Top Asm. w/Flow Indicator
13	736-0242	Bell Wash .340 ID x .872 OD		631-0078	Hard Top Asm. w/Flow Ind. & Icon
14	712-0287	Hex Nut 1/4-20	27	664-0084	Grass Bag
15	710-1250	Carriage Bolt 5/16-18 x 1		664-0085	Grass Bag w/Logo
16	710-0111	Carriage Screw	28	782-5007	Mulcher Plug

Shroud Chart



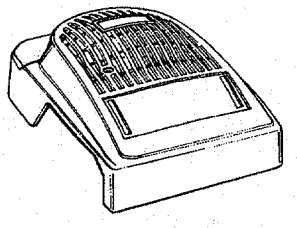
Part No.	Color
751B281439	Dark Red
751B281440	Black
751B281443	Bright Red

Hardware:
710-1256 (Screw)



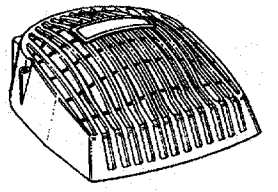
Part No.	Color
731-1395A	Red
731-1396A	Black
731-1397A	Gray

Hardware:
710-1256 (Screw)



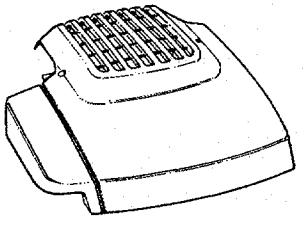
Part No.	Color
731-1587A	Black
731-1603A	Yellow
731-1610A	Pewter
731-1620A	Gray

Hardware:
710-1184 (Screw)



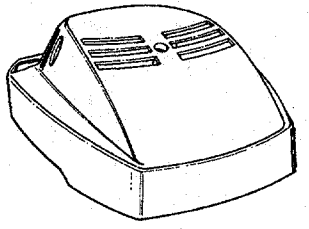
Part No.	Color
731-1561	Black

Hardware:
7510042823 (Screw)



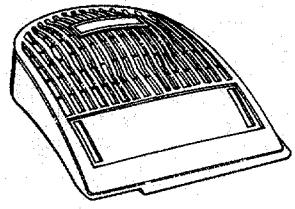
Part No.	Color
731-1402A	Yellow
731-1694	Black
731-1695	Silver
731-1934	Charcoal

Hardware:
710-1258 (Screw)



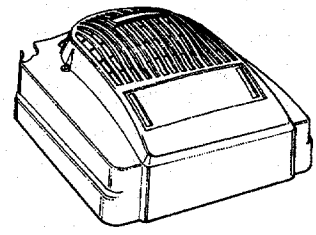
Part No.	Color
7510143208	Black

Hardware:
7510042823 (Screw)



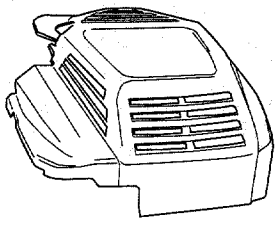
Part No.	Color
731-1585B	Black

Hardware:
710-1274 (Screw)



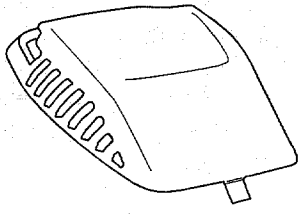
Part No.	Color
731-1586B	Black
731-1612A	Red

Hardware:
7510042823 (Screw)



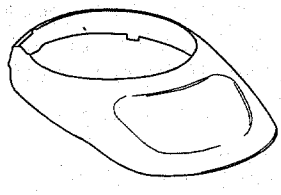
Part No.	Color
751B281451	Gray

Hardware:710-1256



Part No.	Color
751B281476	Black
751B281777	Yellow

Hardware:710-1237



Part No.	Color
7511681311	Black
7511681911	Red
7511682011	Gray

Hardware: - -

Part No.	Color

Hardware:

MANUFACTURER'S LIMITED WARRANTY

For TWO YEARS from the date of retail purchase within the United States of America, its possessions and territories, the manufacturer will, at its option, repair or replace, for the original purchaser, free of charge, any part or parts found to be defective in material or workmanship. This warranty covers units which have been operated and maintained in accordance with the operating instructions furnished with the unit, and which have not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance or alteration.

Normal wear parts or components thereof are subject to separate terms as noted below in the "No Fault Ninety Day Consumer Warranty" clause.

All normal wear part failures will be covered on this product for a period of 90 days regardless of cause. After 90 days, but within the two year period, normal wear parts failures will be covered ONLY IF caused by defects in material or workmanship of OTHER component parts. Normal wear parts are defined as batteries*, belts, blades, blade adapters, grass bags, rider deck wheels, seats, snow thrower skid shoes, shave plates and tires.

How to obtain service: Warranty service is available, with proof of purchase, through your local authorized service dealer. To locate the dealer in your area, please check the yellow pages or contact the Customer Service Department of the manufacturer, P. O. Box 368022, Cleveland, Ohio 44136-9722. Phone 1-800-800-7310. The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by the service department of the manufacturer.

Transportation charges: Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser.

Units exported out of the United States: The manufacturer does not extend any warranty for products sold or exported outside of the United States of America, its possessions and territories, except those sold through the manufacturer's authorized channels of export distribution.

Other Warranties:

1. The engine or component parts thereof carry separate warranties from their manufacturers. Please refer to the applicable manufacturer's warranty on these items.
2. *Batteries are covered by a 90-day replacement warranty.
3. Log splitter pumps, valves and cylinders or component parts thereof are covered by a one year warranty.
4. All other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular purpose, are hereby expressly disclaimed in their entirety.
5. The provisions as set forth in this warranty provide the sole and exclusive remedy of the manufacturer's obligations arising from the sales of its products. The manufacturer will not be liable for incidental or consequential loss or damage.

How state law relates to this warranty: This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Certain disclaimers are not allowed in some states and therefore they may not apply to you under all circumstances.

NOTE: This warranty does not cover routine maintenance items such as lubricants, filters, blade sharpening and tune-ups, or adjustments such as brake adjustments, clutch adjustments or deck adjustments. Nor does this warranty cover normal deterioration of the exterior finish due to use or exposure.